AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) A method of ~~detecting~~ screening for an endometrial disease in a subject, the method comprising:

(a) detecting the levels ~~or~~ amount of chaperonin 10 in a biological sample obtained from the subject ~~one or more endometrial markers associated with endometrial disease in accordance with the method of claim 1~~; and

(b) comparing the levels or amount in ~~"(a)"~~ step (a) with a ~~normal~~ levels or amount ~~of expression~~ of chaperonin 10 ~~the endometrial markers~~ in a control ~~sample~~, wherein a significant difference in the levels or amount of chaperonin 10 in the biological sample ~~endometrial markers~~, relative to the corresponding ~~normal~~ levels ~~or~~ amount in the control, is indicative of endometrial disease.

3. (Currently Amended) A method as claimed in claim 2, further comprising:

(a) contacting ~~a~~ the biological sample obtained from a subject with at least one ~~or more~~ binding agent that specifically binds to chaperonin 10 ~~the endometrial markers or parts thereof~~; and

(b) detecting in the biological sample the level or amounts of chaperonin 10 ~~endometrial markers~~ that binds to the binding agents, relative to a ~~predetermined~~ pre-determined standard or cut-off value, and therefrom determining the presence or absence of the endometrial disease in the subject.

4. (Previously Presented) A method as claimed in claim 3 wherein the binding agent is an antibody.

5. (Canceled)

6. (Currently Amended) A method ~~of claim 5~~ as claimed in claim 3, wherein the level of chaperonin 10 in the biological sample is ~~endometrial cancer markers are~~ significantly higher ~~compared to~~ than the pre-determined standard or cut-off value and ~~are~~ is indicative of endometrial cancer.

7. (Canceled)

8. (Currently Amended) A method as claimed in claim ~~5~~ 2, wherein the biological sample is obtained from a tissues, extracts, cell cultures, cell lysates, lavage fluid, or physiological fluids.

9. (Currently Amended) A method as claimed in claim 8, wherein the biological sample is obtained from a tumor tissue.

10. (Currently Amended) A method as claimed in claim ~~5~~ 2 which further comprises detecting multiple cancer markers.

11. (Withdrawn) A method of claim 1 for determining the presence or absence of endometrial markers associated with an endometrial disease in a subject wherein one or more polynucleotide encoding an endometrial marker in a sample is detected from the subject and relating the detected amount to the presence of an endometrial disease.

12. (Withdrawn) A method as claimed in claim 11 wherein the polynucleotide detected is mRNA.

13. (Withdrawn) A method of claim 12 wherein the polynucleotide is detected by (a) contacting the sample with oligonucleotides that hybridize to the polynucleotides; and (b) detecting in the

sample levels of nucleic acids that hybridize to the polynucleotides relative to a predetermined standard or cut-off value, and therefrom determining the presence or absence of an endometrial disease in the subject.

14. (Withdrawn) A method as claimed in claim 12 wherein the mRNA is detected using an amplification reaction.

15. (Withdrawn) A method as claimed in claim 14 wherein the amplification reaction is a polymerase chain reaction employing oligonucleotide primers that hybridize to the polynucleotides, or complements of such polynucleotides.

16. (Withdrawn)A method as claimed in claim 12 wherein the mRNA is detected using a hybridization technique employing oligonucleotide probes that hybridize to the polynucleotides or complements of such polynucleotides.

17. (Withdrawn)A method as claimed in claim 14 wherein the mRNA is detected by (a) isolating mRNA from the sample and combining the mRNA with reagents to convert it to cDNA; (b) treating the converted cDNA with amplification reaction reagents and primers that hybridize to the polynucleotides, to produce amplification products; (d) analyzing the amplification products to detect an amount of mRNA encoding one or more endometrial markers; and (e) comparing the amount of mRNA to an amount detected against a panel of expected values for normal tissue derived using similar primers.

18. (Canceled)

19. (Currently Amended) A method for monitoring the progression of endometrial cancer in a subject, the method comprising: (a) detecting in a biological sample obtained from the subject, at a first time point, ~~one or more endometrial cancer markers or polynucleotides encoding the markers~~ a level or amount of chaperonin 10 ~~using the method of claim 5~~; (b) repeating step (a) at a subsequent point in time; and (c) comparing the levels or amounts of chaperonin 10 detected in

steps (a) and (b), and thereby monitoring the progression of endometrial cancer.

20. (Currently Amended) A method for determining in a subject whether endometrial cancer has metastasized or is likely to metastasize in the future, ~~the method~~ comprising comparing (a) a levels or amount of ~~one or more endometrial cancer markers or polynucleotides encoding the markers~~ chaperonin 10, in a ~~subject~~ biological sample obtained from the subject ~~in accordance with the method of claim 1~~; and (b) the normal levels or amount or non-metastatic levels or amount of ~~the endometrial cancer markers or polynucleotides encoding the markers~~ chaperonin 10~~,~~ in a control, ~~sample~~ wherein a significant difference between the levels ~~of expression~~ or amount of chaperonin 10 in the ~~subject~~ biological sample and the normal levels or amount or non-metastatic levels or amount of chaperonin 10 in the control is an indication that the endometrial cancer has metastasized.

21. (Currently Amended) A method for assessing the aggressiveness or indolence of endometrial cancer in a subject, comprising comparing: (a) a levels of expression of ~~one or more endometrial cancer markers or polynucleotides encoding the markers,~~ chaperonin 10 in a ~~subject~~ biological sample obtained from the subject ~~using the method of claim 1~~; and (b) a normal levels of expression of ~~the endometrial cancer markers or polynucleotides encoding the markers~~ chaperonin 10~~,~~ in a control ~~sample~~, wherein a significant difference between the levels of expression in the ~~subject~~ biological sample and the normal levels of expression in the control is an indication that the cancer is aggressive or indolent.

22. (Canceled)

23. (Withdrawn) A method for assessing the potential efficacy of a test agent for inhibiting endometrial cancer in a subject, the method comprising: (i) detecting in accordance with the method of claim 1: (a) levels of one or more endometrial cancer markers, in a first sample obtained from a subject and exposed to the test agent, wherein the endometrial cancer markers, (b) levels of the endometrial cancer markers in a second sample obtained from the subject, wherein the sample is not exposed to the test agent, and (ii) comparing (a) and (b), wherein a

significant difference in the levels of expression of the endometrial cancer markers in the first sample, relative to the second sample, is an indication that the test agent is potentially efficacious for inhibiting endometrial cancer in the subject.

24. (Withdrawn) A method of assessing the efficacy of a therapy for inhibiting endometrial cancer in a subject, the method comprising comparing: (i) detecting in accordance with the method of claim 1: (a) levels of one or more endometrial cancer markers in a first sample obtained from the subject; (b) levels of the endometrial cancer markers in a second sample obtained from the subject following therapy, and (ii) comparing (a) and (b), wherein a significant difference in the levels of expression of the endometrial cancer markers in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting endometrial cancer in the subject.

25. (Withdrawn) A method of selecting an agent for inhibiting endometrial cancer in a subject the method comprising (a) obtaining a sample comprising cancer cells from the subject; (b) separately exposing aliquots of the sample in the presence of a plurality of test agents; (c) detecting levels of one or more endometrial cancer markers in each of the aliquots in accordance with the method of claim 1; and (d) selecting one of the test agents which alters the levels of endometrial cancer markers in the aliquot containing that test agent, relative to other test agents.

26. (Withdrawn) A method of inhibiting endometrial cancer in a subject, the method comprising (a) obtaining a sample comprising cancer cells from the subject; (b) separately maintaining aliquots of the sample in the presence of a plurality of test agents; (c) detecting levels of one or more endometrial cancer markers in each of the aliquots in accordance with the method of claim 1 and comparing them; and (d) administering to the subject at least one of the test agents which alters the levels of endometrial cancer markers in the aliquot containing that test agent, relative to other test agents.

27. (Withdrawn) A method of assessing the endometrial cancer cell carcinogenic potential of a test compound, the method comprising: (a) maintaining separate aliquots of endometrial cancer

cells in the presence and absence of the test compound; and (b) detecting the expression of one or more endometrial cancer markers, in each of the aliquots in accordance with claim 1 and comparing them, wherein a significant difference in levels of endometrial cancer markers in the aliquot maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses endometrial cancer cell carcinogenic potential.

28-29. (Canceled)

30. (Withdrawn) Markers that distinguish an endometrium phase or endometrial disease identified by assaying for differential expression of polypeptides in endometrium samples in accordance with the method of claim 1.

31. (Withdrawn) Markers as claimed in claim 30 wherein differential expression is assayed using mass spectroscopy of polypeptides extracted from the samples.

32. (Withdrawn) Markers of claim 31 which are up-regulated in endometrial cancer.

33. (Withdrawn) Markers of claim 31 which are down-regulated in endometrial cancer.

34. (Withdrawn) A set of markers of claim 30 comprising a plurality of polypeptides comprising or consisting of at least 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, or 15 of the markers listed in Table 1, 4, 5, or 6.

35. (Withdrawn) A set of markers of claim 34 wherein the polypeptides are selected from the group consisting of polypeptides with the sequence of SEQ ID NOs. 1, 3, 6, 9, 11, 13, 15, 18, 21, 23, 30, 33, 36, 38, and 40.

36. (Withdrawn) A set of markers of claim 31 wherein the polypeptides are selected from the group consisting of polypeptides with the sequence of SEQ ID NOs. 1, 3, 6, 9, 11, 13, 15, 18, 21,

23, 26, 30, 33, 36, 38, 40, 42, 45, and 47.

37. (Withdrawn) A set of markers of claim 31 wherein the polypeptides are selected from the group consisting of polypeptides with the sequence of SEQ ID NOs. 26, 42, 45, and 47.

38. (Withdrawn) A method of claim 1 wherein the endometrial markers are one or more of the polypeptides listed in Table 1 or they have a sequence of SEQ ID NOs. 1, 3, 6, 9, 11, 13, 15, 18, 21, 23, 26, 30, 33, 36, 38, 40, 42, 45, and 47.

39. (Withdrawn) A method of claim 1 wherein the endometrial marker is chaperonin 10.

40-42. (Canceled)

43. (Withdrawn) A method of monitoring the effects of ovarian hyperstimulation and/or ovulation induction treatments on uterine receptivity which comprises the method of claim 41 wherein: (a) the sample is obtained from a subject receiving the treatments; and (b) wherein the certain phase in which the presence of an endometrial marker is detected in the endometrium is at the time of fertilization, early embryogenesis, and implantation.

44. (Withdrawn) A method of determining a probability of successful implantation with an ovarian stimulation in vitro fertilization and embryo transfer procedure, comprising detecting the uterine endometrial receptivity in accordance with the method of claim 41:(a) wherein the sample is obtained from a subject who has undergone an ovarian stimulation in vitro fertilization and embryo transfer procedure; and(b) wherein determining a probability of successful implantation is based on the subject's determined endometrial marker level;wherein a significantly different endometrial marker level relative to a standard level is associated with a decreased or increased probability of successful implantation.

45. (Withdrawn) A method of any of claim 41 wherein the endometrial marker is glutamate receptor subunit zeta 1, a tryptic fragment thereof, and/or macrophage migration inhibitory factor.

46. (Withdrawn) A method of contraception by interrupting the cyclic presence of an endometrial marker, in particular glutamate receptor subunit zeta 1, a tryptic fragment thereof, macrophage migration inhibitory factor, myosin light chain kinase 2, and/or tropomyosin 1 alpha chain.

47. (Canceled)

48. (Withdrawn) A kit for determining the presence of an endometrial disease in a subject, comprising a known amount of one or more binding agent that specifically binds to an endometrial marker wherein the binding agent comprises a detectable substance, or it binds directly or indirectly to a detectable substance.

49. (Withdrawn) A kit for determining the presence of endometrial disease in a subject of claim 48 wherein the binding agent is oligonucleotide that hybridizes to a polynucleotide encoding an endometrial marker wherein the oligonucleotide is directly or indirectly labeled with a detectable substance.